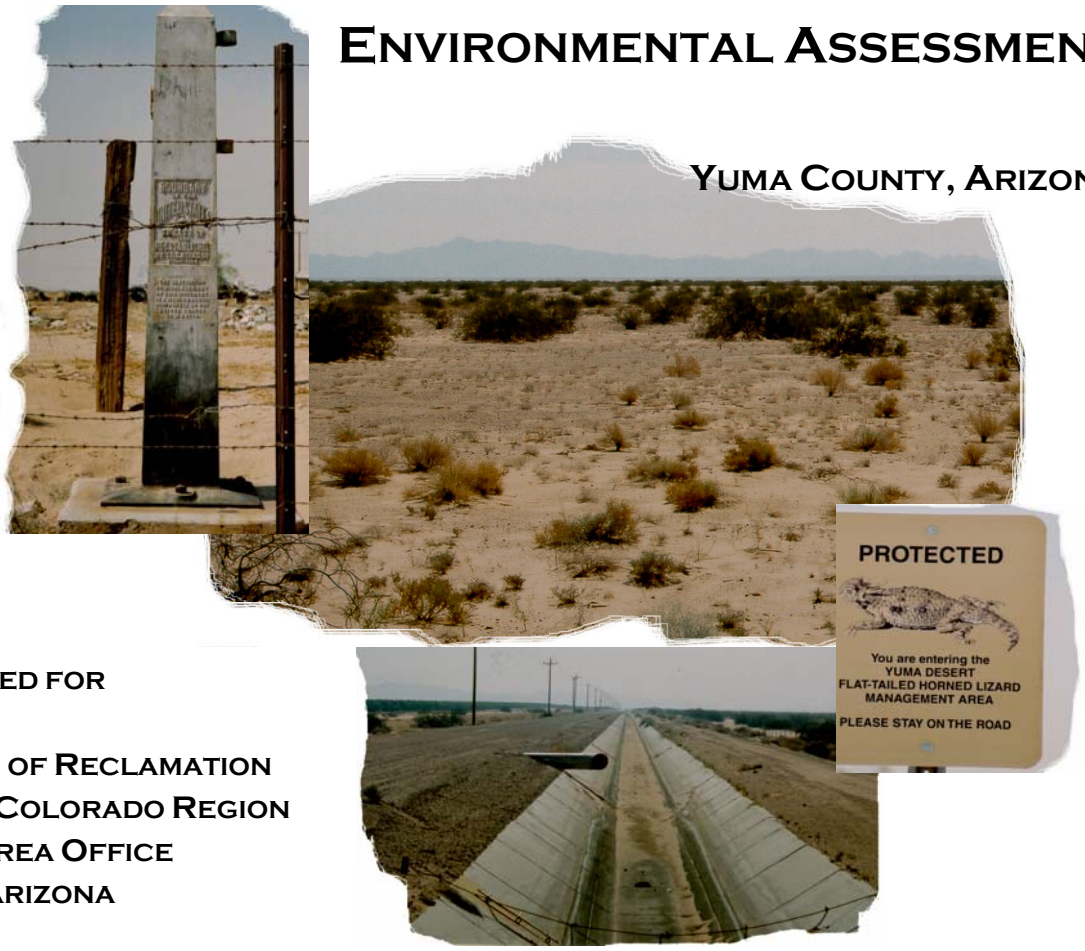
5-Mile Zone Study Area
Draft Resource Management Plan/ Environmental Assessment

Yuma County, Arizona



Prepared for

Bureau of Reclamation
Lower Colorado Region
Yuma Area Office
Yuma, Arizona

Prepared by

Bureau of Reclamation
Technical Service Center
Denver, Colorado

August 2003

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Environmental Assessment

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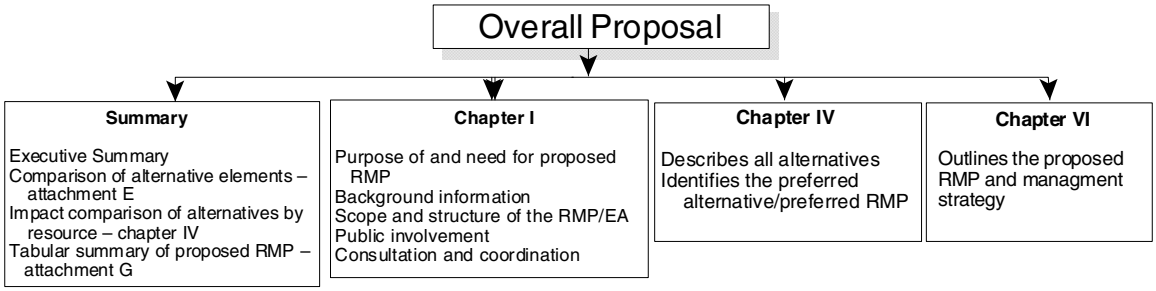
How to Read This Resource Management Plan/ Environmental Assessment

This resource management plan (RMP) / environmental assessment (EA) is an integrated planning and National Environmental Policy Act compliance document. The schematic below will help you locate the information you are most interested in.



Affected Environment or Existing Conditions

Chapter V describes the existing physical and biological resources and environmental factors within the study area:

- Climate
- Air Quality
- Noise
- Topography
- Geology
- Soils
- Land Use and Transportation
- Groundwater
- Vegetation and Wildlife
- Special Status Species
- Recreation
- Visual Resources
- Economics
- Cultural Resources
- Indian Sacred Sites
- Indian Trust Assets
- Environmental Justice

Impacts

Chapter V also describes the potential effects of the No Action Alternative as well as the three proposed action alternatives on the resources and factors.

Cumulative impacts, mitigation measures, and residual impacts have been identified in chapter V, if appropriate.

Supporting Information

Chapter II

Management responsibilities of involved agencies

Chapter III

Planning process, issues, opportunities, and constraints

Other Sections

Abbreviations/Acronyms
Environmental Commitments
List of Preparers
Bibliography
Glossary of Terms
Distribution List
Attachments

Frequently Asked Questions

Who do I contact for more information? See the transmittal letter sent with this document.

What does an acronym (like NEPA) mean? See the list of abbreviations and acronyms before the "Contents."

Where can I find a certain topic? Use the "Contents" at the beginning of the document.

Why doesn't this look like a typical environmental compliance document? Because it is an integrated document that has both planning chapters and environmental compliance chapters contained under the same cover.

Executive Summary

The Bureau of Reclamation (Reclamation) prepared this resource management plan and environmental assessment (RMP/EA) for certain lands within the 5-mile zone, a 5-mile-wide, 13-mile-long strip of land about 10 miles south of Yuma, Arizona, in the extreme southwestern part of the State. Specifically, this planning effort addresses those lands within the 5-mile zone that are east of Avenue H and are under the jurisdiction of Reclamation (5-mile zone study area). Other lands within the 5-mile zone are owned or managed by the Bureau of Land Management (BLM), State of Arizona, city of San Luis, or private landowners.

BLM will address, in a separate resource management plan, the Reclamation lands that it manages along the Colorado River.

PROPOSED FEDERAL ACTION

Preparation and implementation of an RMP is a Federal action that is intended to direct the management of resources within the 5-mile zone study area to maximize overall public and resource benefits for the next 10 years. The National Environmental Policy Act (NEPA) requires Federal agencies to consider the potential effect(s) of a Federal action on the environment before implementing the proposed action. Therefore, Reclamation used a planning process and an appropriate level of environmental analysis to develop this RMP/EA. Once Reclamation adopts the RMP/EA, it will be used as the framework to manage lands within the 5-mile zone study area.

PURPOSE OF AND NEED FOR ACTION

The purpose of the RMP is to establish a 10-year plan detailing the management framework to conserve, protect, enhance, develop, and use the natural and cultural resources within the 5-mile zone study area.

The RMP is needed to do the following:

- Provide decisionmakers with consistent direction and guidance to successfully manage the natural and cultural resources within the 5-mile zone study area.
- Ensure management of the natural and cultural resources are compatible with the authorized purposes of Title I of the Colorado River Basin Salinity Control Act of 1974, Public Law 93-320, as amended by Public Law 96-336.
- Resolve land and water use issues and concerns within the 5-mile zone study area related to the growth of the city of San Luis, Arizona, and surrounding area.

- Address the increasing demand for public use of the resources within the 5-mile zone study area while protecting and enhancing the natural and cultural resources.

AUTHORITY

Title 28 of Public Law 102-575, Section 2805 (106 Statute 4690, Reclamation Recreation Management Act of October 30, 1992) provides Reclamation with authority to prepare resource management plans.

PUBLIC INVOLVEMENT

Throughout the development of this RMP/EA, Reclamation made a concerted effort to involve interested parties, including agencies, special interest groups, and individuals, in planning for the environmental, land, recreation, and wildlife resources within the 5-mile zone study area.

CONSULTATION AND COORDINATION

Reclamation also conducted agency consultation and coordination in the course of developing this document, including consultations required by Section 106 of the National Historic Preservation Act and its implementing regulations, the Fish and Wildlife Coordination Act, as amended, and the Endangered Species Act of 1973, as amended. In addition, Reclamation consulted with the Bureau of Indian Affairs and area tribes about Indian trust assets within the study area.

RESPONSIBILITIES OF DIFFERENT MANAGEMENT ENTITIES IN THE 5-MILE ZONE STUDY AREA

Reclamation maintains primary jurisdiction of the lands and associated resources within the study area; however, other entities may have some limited involvement in managing the study area. Some of these entities include the following.

International Boundary and Water Commission

The International Boundary and Water Commission (IBWC) is responsible for the demarcation of all international boundaries and any water or boundary issues. The IBWC is responsible for annual reports that address the amount of water pumped from Reclamation wells within the 5-mile zone study area, as well as the amount of water pumped from wells by other entities and individuals within the 5-mile zone.

United States Border Patrol

The primary mission of the United States Border Patrol is the detection and apprehension of illegal aliens and smugglers of aliens at or near the international land boundary.

Arizona Game and Fish Department

The Arizona Game and Fish Department (AGFD) has management authority of the State's wildlife, which is held in trust for the citizens of the State of Arizona.

Yuma Area Water Resources Management Group

The Yuma Area Water Resources Management Group (YAWRMG) includes representatives from major water entitlement holders, suppliers, and managers in the greater Yuma area. The group includes irrigation districts, municipalities, and governmental agencies, such as Reclamation. YAWRMG's objective is to more effectively manage and use the water resources available to the greater Yuma area while meeting treaty water quality and salinity requirements with Mexico.

ADJACENT LAND USES

Federal, State, and local government entities manage lands adjacent to and near the study area. BLM, the U.S. Air Force, and the U.S. Navy administer Federal lands adjacent to and near the study area. BLM manages the lands for multiple use and is responsible for managing a wide variety of renewable and nonrenewable resources. As an agency, some of the resources it manages are soils, water, grazing, minerals, wildlife species and habitat, recreation, off-highway vehicles, and heritage resources. The Air Force and the Navy administer lands that primarily support national defense purposes. They administer other lands to manage and protect natural and cultural resources.

The State of Arizona administers several sections of lands adjacent to or within the study area. These lands are used primarily for open space, recreation activities such as hunting, and for agriculture through leases with private parties.

Local government entities, such as the city of San Luis, city or county of Yuma, or private nonprofit organizations, such as the Greater Yuma Port Authority, manage other lands adjacent to the study area. These lands are used primarily for residential and industrial uses while maintaining adequate open space for public recreation.

LAND USE PLANNING PROCESS

Reclamation followed an established land use planning process to prepare this RMP/EA. This process focuses on resolving issues that arise over the use and

management of public lands and resources. A planning issue can be defined as an unrealized opportunity, an unresolved conflict or problem, an effort to implement a new management program as a result of new initiatives or laws and regulations, or a resource or public use value being lost. Not all issues are related to resource management; therefore, an RMP/EA cannot resolve all issues; some must be resolved administratively.

For this RMP/EA, Reclamation identified issues concerning the conflicting demands for consumptive and non-consumptive uses of the land. The primary challenge is to protect natural and cultural resources while allowing uses that have a minimum effect on these resources. Reclamation used three areas of investigation to identify planning issues, opportunities, and constraints:

- Public involvement
- Collection and evaluation of existing resource data
- Review of its internal programs and policies

Similar issues were grouped into issue categories. This RMP/EA addresses the following seven issue categories:

- Land use
- Water use
- Partnerships
- Natural and cultural resources management
- Public information and education
- Recreation management
- Health and safety

MANAGEMENT OPPORTUNITIES

Management opportunities exist within the study area to protect, enhance, and interpret the natural resources; to provide a range of recreation opportunities and facilities, while not adversely affecting existing natural resources; and to evaluate, protect, and interpret cultural resources for public education and enjoyment. Partnerships and cost-share funding opportunities are also available.

MANAGEMENT CONSTRAINTS

When agencies address management changes and other actions, they are constrained by their respective legislative authorities, budgets, personnel, current policies, and

environmental limitations. The ability of land management agencies to manage environmental and recreational resources will always depend on maintaining sufficient personnel and on the ability of the agencies to obtain adequate funding to operate and maintain facilities and programs, as well as to protect and enhance existing opportunities and resources.

ALTERNATIVES

Reclamation developed three action alternatives (i.e., alternatives that prescribe a change in resource management in the study area). In addition to the action alternatives, Reclamation also formulated a No Action Alternative, as required by the Council on Environmental Quality regulations implementing NEPA. The No Action Alternative describes the management of the study area if an RMP were not implemented.

Under Alternative A (No Action Alternative), Reclamation resource management policies and practices within the study area would not change. Management actions to implement programs and policies would occur on a case-by-case basis to meet Federal, State, and local laws and regulations. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Land use authorizations, such as licenses, leases, and permits, would be issued, as currently, on a case-by-case basis.

Under Alternative B (Natural Resources Conservation / Protection Alternative), Reclamation resource management policies and practices within the study area would change. Management actions would be implemented that would protect and enhance natural and cultural resources within the study area. In particular, flat-tailed horned lizard habitat protection would be maximized, pursuant to the Flat-Tailed Horned Lizard Rangewide Management Strategy. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Existing second-party land uses would be scrutinized and eliminated when possible. Public access and recreational use within the study area would be limited to benefit natural and cultural resources. Recreational off-highway vehicle (OHV) use would be eliminated.

Under Alternative C (Recreation, Community, and Commercial Development Alternative), Reclamation resource management policies and practices within the study area would change. Public access and recreational use within the study area would be maximized. Opportunities for nature study, hiking, wildlife observation, camping and day use, and OHV use would be provided to the greatest extent possible, while adhering to the guidance and direction contained in the 1997 Flat-Tailed Horned Lizard Rangewide Management Strategy. Reclamation's capability to meet its water delivery obligations to Mexico would be maintained. Licenses, leases, permits, and other land use authorizations would be issued when compatible with public use of Reclamation lands. Areas deemed appropriate for community expansion, such as utility corridors, transportation routes, community open space, airport, landfills, sewage disposal sites, and recreation and leisure facilities, would be accommodated, as appropriate. Land exchanges or transfers within the 5-mile zone study area would be encouraged.

Under Alternative D (Natural Resources Conservation / Protection with Limited Recreation, Community, and Commercial Development), Reclamation resource management policies and practices within the study area would change. Land use authorizations would be issued on a limited basis for recreation, community, and commercial developments while maintaining Reclamation's capability to meet its water delivery obligations to Mexico, protecting the natural and cultural resources, and conserving flat-tailed horned lizard habitat. Land exchanges or transfers within the 5-mile zone study area would be considered on a limited basis either to protect or enhance the natural or cultural resources in the eastern portion of the study area or to accommodate recreation, community, or commercial developments in the western portion of the study area.

EFFECTS OF THE ALTERNATIVES

No Action Alternative (Alternative A)

Under Alternative A (No Action Alternative), existing air quality conditions would continue. Continued unrestricted OHV use and new developments (roads and facilities) could lead to increased noise and increased wind erosion of soils.

Land use authorizations would continue to be issued on a case-by-case basis, which could lead to conflicting land uses; allow social, physical, environmental, or facility carrying capacities to be exceeded; adversely affect natural or cultural resources, or adversely affect Reclamation's ability to protect Protective and Regulatory Pumping Unit (PRPU) project purposes. Unrestricted OHV use would result in continued adverse effects. Construction of primary roads would be limited to those already under consideration and would meet the public's need and demand for access.

Under Alternative A, if groundwater were used to meet the water needs of new developments, the aquifer could be lowered. However, the quantities needed should not adversely affect Reclamation's ability to meet its water delivery obligations to Mexico, unless total pumpage for the 5-mile zone approaches 160,000 acre-feet per year, the limit stipulated by Minute No. 242. Moreover, if the water supply is obtained from outside the 5-mile zone study area, groundwater within the study area should not be affected.

Wildlife and vegetation would continue to experience habitat loss and degradation, and special status species would continue to experience direct injuries, habitat loss, and degradation.

Public demand for developed and urban recreation facilities and opportunities would go unmet. Additionally, the quality of the recreational experience for those visitors seeking solitude and nature study most likely would decline, and opportunities to interpret the desert environment to further the appreciation and protection would go unrealized. Visual quality could be expected to gradually degrade. New development would continue to foster economic growth.

Adverse effects on cultural resources that might be occurring under existing, largely unregulated land uses would continue. Under normal circumstances, Indian sacred sites would not be affected. However, unauthorized public use would still have the potential to adversely affect these sites. Indian trust assets would not be affected.

Existing environmental justice conditions in the area would continue.

Natural Resources Conservation/Protection (Alternative B)

Alternative B would provide the maximum benefits for air quality among all the alternatives because of increased vegetative cover, fewer roads, and less development, leading to fewer airborne particulates. Noise levels would decrease because recreational OHV use would be eliminated and less development would be allowed.

The effects on soils would be the same as under Alternative A, except that eliminating recreational OHV use would decrease wind erosion of soil in denuded areas.

Fewer overall land uses would be allowed, and the community need for land uses and recreation would be less accommodated than under the other alternatives. Authorized land uses would be compatible with natural and cultural resources and should not adversely affect them.

Alternative B would provide for no secondary road construction and maintenance, and public demand for access would be minimally met.

Effects on groundwater availability would be similar to Alternative A. If the Hillander "C" tract were to be exchanged or transferred and removed from agricultural production, groundwater quality in the area would improve.

Alternative B would provide maximum benefits for vegetation and wildlife because of improved habitat protection and restoration, and the factors that cause mortalities and injuries of special status species would be reduced because of habitat protection and enhancement measures.

Public demand for developed, dispersed, and urban recreation facilities and opportunities would go unmet, including OHV use, would go unmet. Many recreation users could be displaced to other areas. Interpretation and management of natural and cultural resources would emphasize proper use of the resources and protect resources by restricting access. This alternative would best protect the visual quality of the study area.

Land transfers or exchanges could result in decreased agricultural production and, thus, could adversely affect the agricultural sector of the economy. Eliminating existing land use authorizations could adversely affect the regional economy, depending on the type of authorization.

Alternative B would benefit cultural resources and Indian sacred sites because eliminating recreational OHV use would reduce unauthorized incursions onto the land. Intensive surveys for cultural resources also would be required. Indian trust assets would not be affected.

Any decrease in agricultural production could adversely affect minority farm workers. Water stations could benefit illegal immigrants, as well as others needing water in the 5-mile zone study area.

Recreation, Community, and Commercial Development (Alternative C)

Alternative C would result in the greatest potential adverse effect on air quality among all the alternatives because of development of more unsurfaced roads and parking areas and increased industrial and vehicular emissions.

Alternative C also would have the greatest adverse effect on noise levels among all the alternatives because of development of new facilities and increased vehicle use of new and existing roads and OHV areas.

The effects on soils would be the same as under Alternative A; in addition, increased protection would be needed to prevent soil erosion during construction of facilities.

The comprehensive land use strategy under Alternative C would maximize recreation, community, or commercial development, which would provide the maximum benefit to nearby communities. Less land would be protected for natural and cultural resources. Primary and secondary road development would be allowed within the study area, which would allow public demand and need for access to be fully met.

If new developments rely on groundwater, groundwater availability potentially could decrease, and groundwater quality could be adversely affected. However, if the Hillander "C" tract were to be exchanged or transferred and removed from agricultural production, groundwater quality in the area would improve.

Vegetation and wildlife would be adversely affected under Alternative C because the factors that cause mortalities, injuries, habitat loss, and degradation would significantly increase.

Public demand for all types of recreation facilities and opportunities, including urban recreation and open space, would be most fully met. However, users seeking solitude, OHV users, and hunters could be displaced to other areas. Carrying capacities may be exceeded to the point that user conflicts may increase. This alternative would have the greatest adverse effect on visual quality among all the alternatives.

The comprehensive land use strategy would encourage commercial development but provide management guidance, which would provide more security for would-be investors than Alternative A and would benefit the commercial and recreation services sectors of the economy. Land transfers or exchanges and new land use authorizations

could adversely affect the agricultural sector of the economy. However, these adverse effects could be offset by gains to the commercial and recreation services sectors of the economy.

Although regulated, OHV use still could result in incursions onto the land which could adversely affect cultural resources and Indian sacred sites. However, these adverse effects could be offset by intensive surveys for cultural resources and an OHV use plan. Effects on Indian trust assets would be the same as under Alternative A.

Effects on environmental justice would be similar to those under Alternative B. In addition, there would be potential for short-term employment for minority or low-income individuals.

Natural Resources Conservation/Protection with Limited Recreation, Community, and Commercial Development (Alternative D) (Preferred Alternative)

Alternative D would have a greater adverse effect on air quality than Alternative B but a less adverse effect than Alternative C. Alternative D would provide for less construction of unsurfaced roads for recreational access and community and commercial development than Alternative C but more than for Alternative B. Limited development also would mean that adverse effects on noise levels would be less than under Alternative C.

The effect on soils would be the same as under Alternative C except that eliminating recreational OHV use would decrease wind erosion of the soil in denuded areas.

The comprehensive land use strategy under Alternative D would emphasize limited recreation, community, and commercial development throughout the study area, which would benefit nearby communities slightly less than Alternative C but more than Alternative B.

Construction of primary roads and the effects of this construction would be the same as under Alternatives A and B. Secondary roads would be constructed to provide access to campgrounds, day use facilities, and trailheads. Therefore, the environmental effects resulting from the construction of secondary roads would be greater than under Alternatives A or B and the same as under Alternative C. Public demand and need for access would be met.

The effects on groundwater availability would be less than under Alternative C and greater than under Alternatives A and B. The effects on groundwater quality would be the same as under Alternatives B and C.

Alternative D would substantially improve habitat protection and enhancement and would substantially reduce the factors that cause mortalities and injuries, as well as habitat loss and degradation.

Public demand for most types of recreation facilities and opportunities would be partially met, including the demand for urban recreation and open space. Some recreationists could be displaced. Alternative D would have less of an adverse effect on visual resources than Alternative C because fewer recreation and land use facilities would be developed, resulting in fewer intrusions on the natural landscape but a greater adverse effect than Alternatives A or B. Rehabilitation of closed OHV use areas would enhance visual quality.

The effect of Alternative D on the economy of the study area would be similar to that of Alternative C, except that net gains in the commercial and recreation service sectors of the economy may be less.

The effect on cultural resources and Indian sacred sites would be the same as under Alternative B. The effects on Indian trust assets would be the same as under Alternative A.

The effects on environmental justice would be the same as under Alternative C.

PLAN SELECTION

Reclamation followed a formal planning process in preparing this planning and environmental compliance document. After analyzing the four alternatives (or management plans), Reclamation selected Alternative D (Natural Resources Conservation / Protection with Limited Recreation, Community, and Commercial Development) as the preferred management plan. The management actions should be implemented within the 10-year planning period of the RMP; however, implementation depends on, among other things, cooperation of other involved entities, cost-sharing efforts, available funding, and the success of the proposed 5-mile zone study area working group in resolving conflicts and providing valuable input to Reclamation in its effort to prioritize the actions for funding and implementation.

Reclamation has the primary stewardship responsibility to manage the lands under its jurisdiction in accordance with existing laws, regulations, policies, and guidelines. A primary step in the planning process was to identify goals and objectives and associated management actions needed to resolve identified problems, as well as to identify actions and opportunities that would not conflict with existing laws, regulations, policies, and guidelines. In addition, many of the goals and objectives and actions were formulated in response to basic land management principles and concepts.

The basic challenge was to select those combinations of goals, objectives, and management actions that were widely accepted by the public and agency personnel, could be implemented without serious conflicts, within the environmental resource

limitations, within the planning life of the RMP, and consistent with existing laws, regulations, policies, and guidelines, as well as with PRPU project purposes.

The RMP assumes that Reclamation will follow existing and future Federal laws, regulations, and Executive orders when managing lands within the study area.

Acronyms and Abbreviations

Act	Colorado River Basin Salinity Control Act of 1974, as amended
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
APE	Area of potential effect
ASH	Area Service Highway
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
Border Patrol	U.S. Border Patrol
CD	Compact disc
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CSP	Commercial Services Plan
DHS	Department of Homeland Security
District	Hillander "C" Irrigation District
DM 613	*Departmental Manual 613*
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information System
GSA	General Services Administration
GYPA	Greater Yuma Port Authority, Inc.
IBWC	International Boundary and Water Commission
INA	Immigration and Nationality Act
Management strategy	Flat-Tailed Horned Lizard Rangewide Management Strategy
MCAS	Marine Corps Air Station
mg/L	Milligrams per liter
Minute No. 242	Minute No. 242 of the International Boundary and Water Commission
MLWA	Military Lands Withdrawal Act
NAFTA	North American Free Trade Agreement
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
OHV	Off-highway vehicle
O&M	Operation and maintenance
P.L.	Public Law
PRPU	Protective and Regulatory Pumping Unit
Reclamation	Bureau of Reclamation
RMP/EA	Resource management plan/ environmental assessment
Service	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Officer
SIB	Southerly International Boundary
SIP	State Implementation Plan
Stat.	Statute
TDS	total dissolved solids
TEA-21	Transportation Equity Act for the 21st Century
team	A Reclamation interdisciplinary team
toolbox	Toolbox for the Great Outdoors
treaty	1944 Mexican Water Treaty
T&E	Threatened and endangered
U.S.C.	United States Code
YAWRMG	Yuma Area Water Resources Management Group
YMPO	Yuma Metropolitan Planning Organization

Environmental Commitments

AIR QUALITY

- Paving or surfacing primary and secondary roads and parking areas to prevent dust will help reduce airborne particulates throughout the study area. Additionally, requiring dust abatement measures during construction activities and revegetating disturbed areas, including areas disturbed by off-highway vehicle (OHV) use, will reduce airborne particulates.

SOILS

- Plant native vegetation to prevent soil erosion of disturbed areas caused by construction activities. Consider soil characteristics and suitability when planning developments

LAND USE

- All land use permits will contain specific stipulations to protect existing resources, decrease potential conflicts with adjacent landowners, and prevent land use conflicts within the study area. Additionally, any developments within the Yuma Desert Management Area will require special mitigation to avoid adverse effects or loss of unique desert habitat and mitigate for habitat losses and/or impacts to flat-tailed horned lizard habitat.

GROUNDWATER

- Careful monitoring of groundwater levels and groundwater quality will be needed to evaluate current impacts and to project or estimate future groundwater levels and quality. If projected groundwater levels or groundwater quality approach unacceptable limits, appropriate mitigation will be to find an alternate surface water supply to replace all, or at least a sufficient portion of, the pumped groundwater to prevent an unacceptable drop of groundwater levels or degradation of groundwater quality.

FLAT-TAILED HORNED LIZARD AND PLANT AND WILDLIFE SPECIES ASSOCIATED WITH THE FLAT-TAILED HORNED LIZARD

The following environmental commitments apply specifically to protection and recovery of the flat-tailed horned lizard, but they also benefit a wide range of plant and wildlife species associated with the flat-tailed horned lizard, thus benefiting a wide range of Sonoran Desert species.

- Define and implement management actions necessary to minimize loss or degradation of habitat.
- Mitigate and compensate project impacts to flat-tailed horned lizard habitat both within and outside the Yuma Desert Management Area.
- Implement construction-related mitigation measures:
  - Limit surface-disturbing activities to the dormant period for the flat-tailed horned lizard (November 15 through February 15).
  - Develop and implement a worker education program.
  - Locate surface-disturbing projects outside the Yuma Desert Management Area as much as possible. If a project must be located within the Yuma Desert Management Area, try to locate in a previously disturbed area or in an area with poor habitat quality.
  - Designate a field contact representative that will have authority to ensure compliance with protective measures, including the ability to halt activities that violate these terms and conditions.
  - Clearly flag project areas and limit all construction activities to these areas.
  - A biological monitor may be present on construction sites to ensure project activities comply with protective measures, inspect constructed holes and trenches for flat-tailed horned lizards prior to backfilling and to capture and relocate individuals if necessary.
  - Within flat-tailed horned lizard habitat, areas of disturbance of vegetation and soils shall be the minimum required for the project. If possible, specify a maximum disturbance allowable. Vegetation clearing and grading shall be minimized. Wherever possible, use existing highways rather than clearing and grading new right-of-way.
  - Enclose sites of permanent or long-term projects in management areas where continuing activities are planned and where flat-tailed horned lizard mortality could occur with flat-tailed horned lizard barrier fencing to prevent lizards from entering the project, where they may be subject to collection, death, or injury. Barrier fencing should consist of 0.5-inch wire mesh fastened securely to posts. Wire mesh should extend at least 12 inches above ground and below ground.

- Project specific habitat restoration plan should include the following elements:
  - Collecting and replacing topsoil
  - Preparing seedbeds, fertilizing, and seeding of native species
  - Controlling noxious weeds
  - Controlling erosion
  - Eliminating any hazards to flat-tailed horned lizards, such as holes or trenches
  - Minimizing disturbance of perennial shrubs during restoration
  - Periodically inspecting restored areas

Additional mitigation may be required to compensate for any residual construction impacts that remain.

- Limit land use authorizations that cause surface disturbing within the flat-tailed horned lizard management areas as follows:
  - Make every attempt to locate projects outside of the Yuma Desert Management area
  - Permit new rights-of-way only along boundaries of management areas and only if impacts can be mitigated to avoid long-term effects on population of flat-tailed horned lizards in the management area.
  - Where discretionary, permit other new authorizations if the habitat disturbance does not pose a significant barrier to lizard movements. Limit disturbance to 10 acres or less per authorization, if possible. If individual disturbances over 10 acres are necessary, contact the Interagency Coordinating Committee and the Management Oversight Group to provide suggestions for minimizing potential impacts to flat-tailed horned lizards. The cumulative new disturbance per management area may not exceed 1 percent of the total acreage. All authorizations must be conducted in accordance with applicable mitigation and compensation.
  - Retain all federally owned lands in the Yuma Desert Management Area in Federal ownership.
  - Maintenance of all existing right-of-way facilities may continue within management areas.
  - The proposed Area Service Highway is outside of the Yuma Desert Management Area. This and other new road construction along the boundary of the Yuma Desert Management Area shall require fencing to reduce access to the management area and lizard exclusion fencing to reduce lizard mortality.

- Limit vehicle access and limit route proliferation within management areas, as follows:
  - Reduce new road construction to a minimum by coordinating access needs and avoiding conflicts and replication in road use, development, and management.
  - Allow maintenance of roads on a case-by-case basis, recognizing that maintenance of some roads may be necessary to prevent proliferation of parallel routes.
  - Any new surface disturbance associated with road maintenance shall require mitigation.
- When conducting land exchanges "for the benefit of natural resources" use the following guidelines:
  - Large blocks of habitat containing large populations of a target species, such as the flat-tailed horned lizard, are better than small blocks of habitat containing small populations.
  - Blocks of habitat close together are better than blocks far apart.
  - Habitat in contiguous blocks is better than fragmented blocks.
  - Interconnected blocks of habitat are better than isolated blocks.
  - Blocks of habitat that are roadless or otherwise inaccessible to humans are better than roaded and accessible habitat blocks.

RECREATION

- Recreation facility development will complement the surrounding landscape as much as practical and will follow strict design and construction criteria, guidelines, and standards.
- Carrying capacity limits and user demand will be properly determined before major facilities are developed.
- Bilingual regulatory and informational signage will be posted throughout the study area to inform the public of the rules and regulations governing the use of the federally owned lands within the study area.
- Visitor use will be monitored to identify potential user conflicts and corrective actions to be taken if conflicts are identified.

CULTURAL RESOURCES

Reclamation will do the following:

- In consultation with the State Historic Preservation Officer and area Indian tribes—and based on the Class I survey—develop a research design for conducting Class II or III surveys (1) to determine areas of high or low potential for cultural resources, including traditional cultural properties, (2) to determine sources of impacts and (3) to define additional investigation or protective actions appropriate for each site. The plan will serve to support requests for funding to implement necessary actions.
- Conduct intensive surveys of areas with high potential for cultural resources and/or any areas scheduled for ground-disturbing or potentially ground-disturbing activities to locate cultural resources. During ground-disturbing activities, Reclamation will make every effort to avoid significant cultural resources.
- During construction, if cultural resources are discovered, ensure that work in the immediate areas ceases until a qualified archeologist evaluates the site, takes appropriate measures, and consults with the SHPO.
- Ensure that any project-specific agreements regarding cultural resources are included as specifications in construction contracts and inform construction contractors about the presence of cultural resources within or near the project area and about their protection under Federal and State laws.
- When granting easements on or across Reclamation-owned lands, review the proposal for potential effects on cultural resources and ensure that the entity receiving the easement complies with all applicable cultural resource laws for any activities within the boundaries of the easement.

Specific mitigation cannot be identified until the intensive surveys are completed to determine if cultural resources are present that are eligible for the *Federal Register*. The following mitigation strategies presume that one or more archeological sites or traditional cultural properties will be determined eligible for the *Federal Register* and will be affected by the proposed action. The exact nature of mitigation will be determined in consultation with the State Historic Preservation Officer and others, as appropriate, and documented in a memorandum of agreement with the consulting and interested parties.

- Periodically monitor *Federal Register*-eligible or unevaluated sites to assess impacts and the need for investigative or protection action.
- Place protective materials over portions of sites affected by erosion or trail construction or use to prevent additional disturbance.
- Recover site data through systematic surface collection or excavation and provide resulting reports to the professional community and interested public.

- Further consult with area tribes about appropriate actions to protect endangered traditional cultural properties sites and implement those actions where reasonable and feasible.
- Incorporate information about cultural resources into brochures and other educational materials created for use in the study area.

INDIAN SACRED SITES

Executive Order 13007 does not authorize agencies to mitigate for the impact of their actions on Indian sacred sites. However, it does direct agencies to avoid adverse impacts when possible. If consultations determine that adverse impacts will occur from implementation of the proposed action, then Reclamation will seek means to avoid these adverse impacts.

INDIAN TRUST ASSETS

If consultations determine that adverse impacts will occur from implementation of the proposed action, Reclamation will seek means to avoid these impacts. If adverse impacts cannot be avoided, then Reclamation will provide appropriate mitigation or compensation.

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Glossary

5-mile zone: The 5-mile-wide, 13-mile-long strip of land about 10 miles south of Yuma, Arizona, in the extreme southwestern part of the State.

5-mile zone study area: Those lands within the 5-mile zone that are east of Avenue E and under the jurisdiction of Reclamation.

acre-foot: Amount of water needed to cover 1 acre with 1 foot of water.

Affected environment: Existing biological, physical, social, and economic conditions of an area subject to change, both directly and indirectly, as the result of a proposed human action.

Air quality: Measure of the health-related and visual characteristics of the air, often derived from quantitative measurements of the concentrations of specific injurious or contaminating substances.

Aquifer: Underground water-bearing geologic formation or structure.

Archaic: In American archeology, a cultural stage following the earliest known human occupation in the New World (about 5,500 B.C. to A.D. 100). This stage was characterized by a generalized hunting and gathering lifestyle and seasonal movement to take advantage of a variety of resources.

Artifact: A human-made object.

Climate: Average conditions of the weather over a number of years.

Cone of influence (cone of depression): The depression, roughly conical in shape, produced in the water table by the pumping of water from a well.

Cooperative Agreement: Formal document that states the obligations of Reclamation to one or more other parties.

Corridor: Narrow strip of land reserved for location of transmission lines, pipelines, and service roads.

Council on Environmental Quality (CEQ): Establishes regulations for implementing the procedural provisions of the National Environmental Policy Act.

Crime Witness Protection Program: A program originally created by the Bonneville Power Administration (BPA) to protect transmission systems, substations, facilities, property, and personnel. The BPA administers the Bureau of Reclamation's program through an agreement signed in October 1998. The program offers cash awards up to $1,000 for information leading to the arrest and conviction of persons committing crimes. Signs posted at facilities direct informants to call a toll-free number to report suspicious or criminal activity.

Cultural resource(s): Any building, site, district, structure, or object significant in history, architecture, archeology, culture, or science.

Desired Future Condition: The future condition of the study area that results from achieving the goals and objectives identified in the Resource Management Plan.

Environment: All biological, chemical, social, and physical factors to which organisms are exposed. The surroundings that affect the growth and development of an organism.

Environmental analysis: Systematic process for consideration of environment factors in land management actions.

Environmental assessment (EA): A National Environmental Policy Act compliance document used to determine if an action would have a significant effect on the human environment. If not, a finding of no significant impact is written. If so, an environmental impact statement is written

Erosion: Surface displacement of soil caused by weathering, dissolution, abrasion, or other transporting.

Executive order: A written directive of the President of the United States.

Finding of no significant impact (FONSI): A National Environmental Policy Act compliance document which affirms that an environmental assessment found that alternatives were evaluated and a proposed action would have no significant impact on the human environment.

Geographic Information System: A digital geographic database used to analyze and store data.

Geology: The science that deals with the physical history of the earth, the rocks of which it is comprised, and the physical changes which the earth has undergone or is undergoing.

Goal: A brief statement describing the end result of implementing a management action or series of actions. A goal can also be considered a desired future condition which the Bureau of Reclamation wishes to achieve within the management area.

Groundwater: Generally, all subsurface water as distinct from surface water; specifically, that part of the subsurface water in the saturated zone where the water is under pressure greater than atmospheric.

Habitat: The area or type of environment in which a plant or animal normally lives or occurs.

Groundwater mound: A portion of an unconfined aquifer with a water table elevated above that of the surrounding aquifer. It is often the result of a relatively high rate of recharge (for example, from infiltrating irrigation water) to the aquifer at the location of the mound.

Objective: A brief statement or series of statements that briefly describe an action that will achieve a specific goal identified in a Resource Management Plan.

Protective and Regulatory Pumping Unit (PRPU): The well field authorized by Section 103(a) of Public Law 93-320.

Qualitative: Having to do with quality or qualities. Descriptive of kind, type or direction as opposed to size, magnitude, or degree.

Quantitative: Having to do with quantity, capable of being measured. Descriptive of size, magnitude, or degree.

Right-of-way: A vested property right given to another entity for the use of a specified piece of land for specific purposes.

Sacred site: Any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred.

Site: In archeology, any location of past human activity.

Total dissolved solids (TDS): A quantitative measure of the residual mineral dissolved in water that remains after the evaporation of a solution. Usually expressed in milligrams per liter or parts per million. Total amount of dissolved material, organic and inorganic, contained in water.

Unconfined aquifer: An aquifer with continuous layers of materials of relatively high permeability extending from the land surface to the base of the aquifer. The upper surface of an unconfined aquifer is the water table.

Well field: Area containing one or more wells that produces usable amounts of water.

Xeriscape: Landscaping that does not require a lot of water.

Yuma Desert Management Area: 16,000 acres within the 5-mile zone study area that Reclamation manages for the flat-tailed horned lizard and as described in the 1997 Flat-Tailed Horned Lizard Management Strategy.

Distribution List

CONGRESSIONAL DELEGATION

U.S. Senators

John Kyl
John McCain

U.S. Representative

Raul Grijalva, Arizona District 7
Ed Pastor, Arizona District 4

ARIZONA STATE LEGISLATURE

Senator Robert Cannell, District 24
Representative Amanda Aquirre, District 24
Representative James R. Carruthers, District 24

All locations are in the State of Arizona, unless otherwise indicated.

INDIAN TRIBES

All locations are in the State of Arizona, unless otherwise indicated.

Ak-Chin Indian Community, Maricopa
Campo Band of Mission Indians, Campo, California
Chemehuevi Tribal Council, Lake Havasu, California
Cocopah Indian Community, Somerton
Colorado River Indian Tribes, Parker
Fort Mcdowell Mohave-Apache Community, Fountain Hills
Fort Mojave Indian Tribe, Needles, California
Fort Yuma Quechan Tribe, Yuma
Gila River Indian Community, Sacaton
Hopi Indian Tribe, Kykotsmovi
Hualapai Indian Tribe, Peach Springs
Pueblo of Zuni, Zuni, New Mexico
Salt River Pima-Maricopa Indian Community, Scottsdale

San Carlos Apache Tribe, San Carlos
Tohono O'Odham Nation, Sells
Viejas Tribal Council, Alpine, California
Yavapai Prescott Indian Tribe, Prescott

FEDERAL, STATE, AND LOCAL AGENCIES

Federal

Department of Agriculture
- Natural Resource Conservation Service, Phoenix, Yuma

Department of the Interior
- Bureau of Indian Affairs, Yuma
- Bureau of Land Management, Yuma
- Fish and Wildlife Service, Phoenix
- Geological Survey, Tucson, Yuma

Drug Enforcement Administration, Yuma

Department of Homeland Security
- Immigration and Naturalization Service, Laguna Niguel, California
  - Border Patrol, Yuma,

Marine Corps
- Marine Corps Air Station, Yuma

Treasury Department
- Customs Service, Tucson,
  - San Luis Port-of-Entry, San Luis

State of Arizona

Department of Corrections, Phoenix, Yuma
Department of Environmental Quality, Phoenix
Department of Game and Fish, Yuma
Department of Transportation, Phoenix, Yuma

Yuma County

Board of Supervisors, Yuma
Department of Development Services, Yuma
Department of Public Works, Yuma
Planning and Zoning Commission, Yuma

City of San Luis

City Administrator
Economic Development Commission
Public Works Department
Police Department

City of Somerton

Administrator

City of Yuma

Department of Community Development
Department of Economic Development
Department of Parks and Recreation
Department of Public Works
Office of the City Administrator

Libraries

San Luis Branch Library, San Luis
Somerton Branch Library, Somerton
Yuma Library, Yuma

Interested Organizations and Individuals

Arizona Public Service Company, Yuma
Barkley Family Liquidating Trust, Yuma
Border Ranches LLC, Yuma
Citizens Title and Trust, Yuma
Colvin, John, Yuma
Cuming Farms Inc., Yuma
Duran, Robert C. and Barbara, Somerton,
George, Terri, Yuma
Griffin Family Ltd. Partnership, Somerton
Griffin Ranches Inc., Somerton
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Hawk, Michal Marie and Tim, San Diego, California
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Simpkins, Jennifer, Phoenix
Von Verde Ltd., Yuma
Von Verde Ltd Partnership, Yuma
Von Verde Packing House Ltd., Yuma
Yuma County Water Users' Association, Yuma
Yuma Metropolitan Planning Organization, Yuma
Yuma Natural Resource Conservation District